

**REMARKS**

**Status of Claims:**

Claims 1, 2, and 6 are amended. Claims 1-3 and 5-8 remain for examination.

**Examiner's Inquiry:**

On page 2 of the Office Action dated July 12, 2005, the examiner requested further explanation as to where in the specification items 23, 24, 27, and 28 are detailed. Items 23, 24, 27, and 28 are detailed in the specification on page 11, lines 1-18; page 12, lines 8-13; page 12, lines 16-21; page 13, lines 12-22; page 14, lines 5-11 and 18-23; page 15, lines 4-7; and page 16, lines 3-11.

As stated in the specification and shown in Figs. 1 and 4, item 23 is an optical transmit interface (IF) which conducts the optical signal from an OE (opto-electrical conversion) module 22 to an optical cable 44. Items 24, 27, and 28 are similar devices. It is irrelevant whether they are "passive" or "active" because other features of the claims distinguish over the prior art.

**Prior Art Rejection:**

Claims 1-3 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaharu et al. (U.S. Patent No. 5,130,836).

The examiner's rejections are respectfully traversed.

Claim 1 is now amended to recite:

An optical transmission system, comprising an optical communication apparatus, a communicating party of said optical communication apparatus, and a monitor device for performing monitoring of optical signals transmitted and received between said optical communication apparatus and said communicating party;

wherein said optical communication apparatus comprises:

an optical branching transmitting device having a single input and a first and second outputs, for branching input optical signals to

be transmitted to said communicating party from the single input into first optical signals on the first output and second optical signals on the second output;

a first transmit interface coupled to receive said first optical signals from said optical branching transmitting device, said first transmit interface connected to only to a single optical cable for transmitting said first optical signals to said communicating party;

a second transmit interface coupled to receive said second optical signals from said optical branching transmitting device and for transmitting said second optical signals to said monitor device;

a receive interface coupled to receive optical signals from said communicating party and providing received optical signals;

an optical branching receiving device having a single input and a first and second outputs, wherein said single input is connected to said receive interface for receiving said received optical signals and for branching said received optical signals into third and fourth optical signals respectively on the first and second outputs;

additional circuitry of said optical communicating apparatus connected to receive said third optical signals from said optical branching receiving device;

a third transmit interface connected to receive said fourth optical signals from said optical branching receiving device and for transmitting said fourth optical signals to said monitor device;

wherein said monitor device includes a display and performs monitoring of data contents of said second and fourth optical signals.

The underlined portions of the above claim 1 help to focus the examiner's attention on portions of applicant's amended claim 1 which distinguish applicant's invention from the prior art.

Claim 1 recites a "a monitor device for performing monitoring of optical signals transmitted and received between said optical communication apparatus and said communicating party", and that "wherein said monitor device includes a display and performs monitoring of data contents of said second and fourth optical signals." This monitor allows an observer to view the contents of the data being transmitted or received. (See page 13, lines 23-27 of the present application.) The feature of a monitor capable of monitoring the

contents of the transmission data is essential to the present invention, and such a monitor is neither described nor suggested by the prior art.

On page 3 of the Office Action, the examiner referred to the PTi of Fig. 3 of Kaharu as a monitor device. The PTi is an optical transceiver which connects the BCi (bus controller circuitry) to the optical couplers C1 and C2. (Kaharu, col. 1, lines 29-35.) The PTi modulates the transmission data (SD) from the BCi and to converts the data into optical signals for transmission. (Kaharu, col. 1, lines 54-61.) Although the PTi comprises the MA (monitoring pulse appending) unit and the MP (monitoring pulse detector) unit, these units do not perform the monitor functions as recited in claim 1 of the present application. The MA unit and the MP unit append or remove data streams called “monitoring pulses”. These “monitoring pulse” are used to ensure whether the data transmission is “normal” or not. (Kaharu, Fig. 4 and col. 4, lines 42-65.) Hence, the MA and MP units of the PTi merely performs data integrity checks using the “monitor pulses”. Neither the MA/MP units nor any other portion of the PTi allow a user to monitor the contents of the data transmission through a display as recited in applicant’s claims.

As shown in Fig. 3 of the present application, the monitor device of the present invention takes in an input signal and displays that on a display, allowing an observer to monitor the contents of the transmission data. Hence, the monitor device of claim 1 is distinguishable from the PTi unit in Kaharu.

Furthermore, claim 1 recites “an optical branching transmitting device having a single input and a first and second outputs, for branching input optical signals to be transmitted to said communicating party from the single input into first optical signals on the first output and second optical signals on the second output.” This feature is illustrated in Fig. 2 of the present application, which shows a single input connector 1 and two output connectors 3 and 4. The “optical branching receiving device” recited in claim 1 similarly has a single input and two outputs.

The optical couplers (C1 and C2) of Kaharu each combines two inputs (Pa and Pb) to produce two outputs (Pc and Pd). (See Kaharu, Figs. 1 and 3, and col. 1, lines 62-67.) In

each of the optical couplers of Kaharu, one input (Pb) is from the associated TEi (terminal), while the other input (Pa) is from another terminal. (See Fig. 1 of Kaharu.)

The feature of having only one input connected to the branching means is important to the present invention because this allows the monitoring device to monitor only the data transmitted by or received by the one optical communication apparatus. If more than one input is connected to the branching means, then it will not be possible to distinguish whether the data being monitored is associated with said communication apparatus or associated with another apparatus. Therefore, the features of the “optical branching transmitting device” and the “optical branching receiving device” of claim 1 are distinguishable from the prior art as well.

MPEP § 2143.03 states that “[t]o establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” In light of the differences above, it is submitted that the PTO has not made out a *prima facie* case of obviousness under the provisions of 35 U.S.C. § 103, and thus claim 1 and its dependent claims are patentable over the prior art. Independent claim 6 has been amended in a similar manner as claim 1 but is recited in method format. Hence claim 6 and its dependent claims are likewise deemed patentable.

**Conclusion:**

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to

Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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